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ABSTRACT

A compilation of resources is provided for those interested in examining action taken by the executive branch of the federal government to foster scientific and engineering excellence in the United States in the nineteenth century. The resources are intended for use by pre-college secondary science and social studies teachers. Each of the resources listed in the bibliography section of the document can be obtained from any typical college library and from most public libraries by making use of interlibrary loans. The resources are divided into seven groups: historical references, reference works, non-print resources, Historic American Engineering Record and Historic American Buildings Survey, patent research, organizations, and National Archives and Records Administration. (DB)

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RESOURCES FOR TEACHERS

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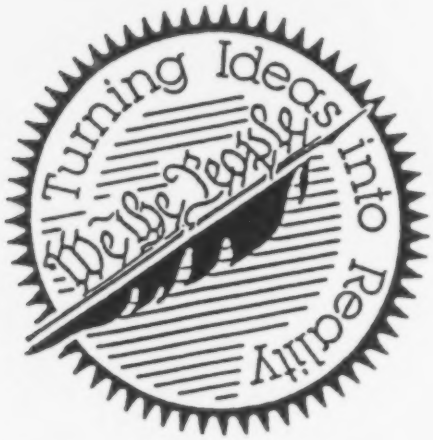

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- A WORD ABOUT THESE RESOURCES -

The resources included in this compilation have been selected to satisfy several criteria. Those include the relevance to the subject of the institute for which this list was created, availability to the secondary teacher, and the academic nature of the material.

Publications listed in the bibliography section do not strictly deal with the time period of the First Federal Congress or the Presidential administrations of George Washington or John Adams; points of focus for the Institute. Included in the bibliography are publications which might be useful for background information on the stage set for the industrial revolution during the colonial period of American history. In addition, publications are also included which relate to the first three decades of the Nineteenth Century. During the period 1800-1830 the basis for scientific and engineering excellence established by the federal government after 1789 was the underpinning for tremendous expansion. Major changes were made in the patent system, for example, primarily because of the problems encountered with the Patent Laws of 1790 and 1793. A real understanding of the efforts of the first federal administrations to foster scientific and engineering excellence requires a future projection; a look at what evolved because of those efforts.

Each of the resources listed in the bibliography can be obtained from any typical college library and from most public libraries making use of interlibrary loan. During the course of compilation each reference was actually obtained through the library of Community College of the Finger Lakes in Canandaigua, New York. All but the smallest public libraries should also be able to make any reference on the list available to a patron.

None of the resources included in this compilation, with the possible exception of a few non-print materials, can be considered "children's literature." Publications aimed at students in the lower grades have been purposely omitted. This was done in an effort to provide a diverse list of useful resources while keeping its size manageable. Since the stated audience for the Institute consisted of teachers of pre-college secondary students only resources which meet the needs of that audience are listed.

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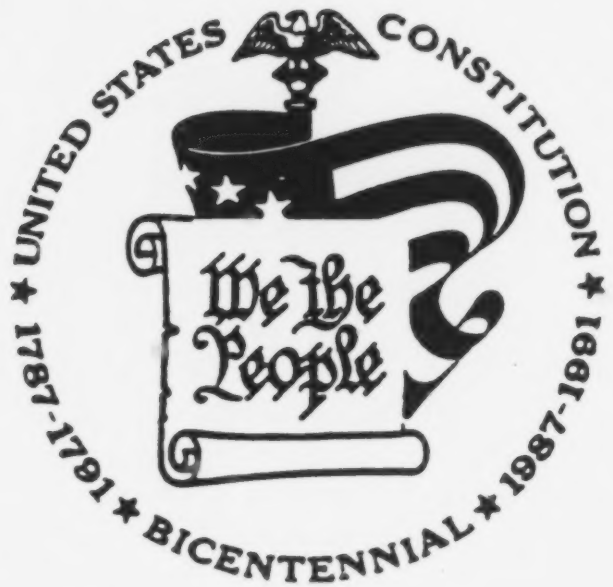

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Zagorskii, F.N. An Outline of the History of Metal Cutting Machines to the Middle of the 19th Century. [Translated from the Russian.] (New Delhi: Amerind, 1982)

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Coopers Town, April 9th, 1793.

GENTLEMEN,

Being convinced that you feel an intereſt in the manufactory of *maple* ſugar, and that your wiſhes and exertions to prevent the deſtruction of the trees from whence it is produced, have been of public utility—We are encouraged to tranſmit to you the ſtatement we have been able to make from actual obſervation of the quantity of ſugar, which has been made this ſeaſon, in the former townſhip of Otſego, and which was an entire wilderneſs in 1786—We find upon a moderate calculation, that there has been made at leaſt one hundred and ſixty thouſand pounds weight, which at nine pence per pound is equal in value to 15000 dollars. This plain demonſtration of the importance of this article, will we hope, induce you to continue your endeavours to promote and encourage it, and we would ſubmit to your conſideration whether it is not an object of ſufficient conſequence to claim the encouragement of the legiſlature of your ſtate.

WILLIAM COOPER,
RICH. R. SMITH,
RENSSEL. WILLIAMS, jun.
CHARLES FRANCIS,
LEWIS DE VILLERS,
EBBAL.

To HENRY DRINKER,
BENJAMIN RUSH,
TENCH COXE, Philadelphia.

- REFERENCE WORKS -

An important adjunct to teaching and learning is knowing where to find additional information about a subject. For that reason the reference books listed in this section may be useful to Institute participants. The reference books listed here are of two kinds; those providing background on a specific subject, and those which can be classified as finding aids for additional resources. In addition, they might also be classified into two areas of interest: the Constitution itself, and the history of science and technology.

Many of the reference works on the following pages may be familiar already. The more common reference tools are included with more specialized works so that experienced teachers can be reminded of their utility; and those will less experience can be made aware of their existence.

Resources on the subject of Executive Branch action in fostering scientific and engineering excellence in the Nineteenth Century can be found in many reference works. The subject matter is cross-disciplinary thus offering students, on both sides of the desk, a number of options in reference work. Reference tools aimed at government and the Constitution, natural sciences, social sciences, technology, and business are all useful for work in the broad field defined by the Institute.

Included in this section are several references which include compendia of state laws. There are many other similar collections. It was not possible to include all of the possibilities for access to early state legislation. However, several representative sources are included. Many of them have been republished and updated at intervals. Consequently, dates of publication have not been given. It would serve equally well to obtain a later edition and teachers can avail themselves of whatever editions may be available in their areas. The best sources are large public libraries, local government and court law libraries, and state legislative libraries. Representative works are included only for those states with teachers in attendance at the institute for which this compilation was prepared.

Also included here are several edited versions of the personal papers of George Washington, John Adams, and Thomas Jefferson. These are only representative samples of the edited and published papers available. They are good primary sources for teacher use. They can also be used as an excellent means of illustrating specific points, giving the flavor of the men's arguments in their own words, or

introducing students to the use of primary sources.

The following may be of particular interest to Institute participants and teachers of interdiciplinary history and science:

_____. America: History and Life. (Santa Barbara, CA: ABC-Clio, 1955-Date)

_____. Applied Science and Technology Index. (New York: H.W. Wilson, 1958-1969)

_____. Bibliographic Index. 19 vols. (New York: H.W. Wilson, 1937-Date)

_____. Biography Index. 14 vols. (New York: H.W. Wilson, 1946-1984)

_____. Combined Retrospective Index to Journals in History, 1838-1974. 9 vols. (Arlington, VA: Carrollton Press, 1977)

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_____. Industrial Arts Index. (New York: H.W. Wilson, 1913-1957)

_____. Poole's Index to Periodical Literature. 6 vols. (Magnolia, MA: Peter Smith Pub, 1802-1906)

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Bickford, Charlene Bangs. "The Documentary History of the First Federal Congress." Prologue. Vol. 18. Fall 1986. pp. 173-179.

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Cark, Rheta A; Roth, David M. and Soderlind, Arthur E. Connecticut Yesterday and Today: A Selected Bibliography for Connecticut Schools. Connecticut State Department of Education Bulletin 118. (Hartford: The Department, 1974)

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Fitzpatrick, John. C. (ed). The Writings of George Washington from the Original Manuscript Sources, 1745-1799. 39 vols. (Washington, DC: Government Printing Office, 1931-1944)

Ford, W. C, et al (eds). The Journals of the Continental Congress, 1774-1789. 34 vols. (Washington, DC: Government Printing Office, 1904-1937)

Ford, Paul L. (ed). The Works of Thomas Jefferson. 12 vols. (New York: G.P. Putnam, 1904-1905.

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Hutson, James (ed). Supplement to Max Farrand's "Records of the Federal Convention of 1787." (New Haven: Yale Univ. Press, 1987)

Kaminski, John P; Leffler, Richard and Saladino, Gaspare J. "The Documentary History of the Ratification of the Constitution." Prologue. Vol. 18. Fall 1986. pp. 153-161.

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New York State. Education Department. State Library. Checklist of Official Publications of the State of New York. (Albany, NY: State Education Dept, 1947-Date)

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Reingold, Nathan (ed). The New American State Papers. Science and Technology. Vol. 4. "Patents." (Wilmington, DE: Scholarly Resources, Inc, 1973)

Richardson, James D. (comp). A Compilation of the Messages and Papers of the Presidents, 1789-1897... 20 vols. (New York: Bureau of National Literature, 1917)

Saladino, Gaspare J. "A Guide to Sources for Studying the Ratification of the Constitution by New York State." [Schechter, Stephen L. (ed)] The Constitutional Period: A Resource Book. Prepared for "Classic Works of American Federal Democracy," a teacher's institute, sponsored by the Center for the Study of Federalism, with the support of the National Endowment for the Humanities. Big Sky, Montana. August, 1984. [A possible contact for this unpublished 2-inch thick compilation would be Russell Sage College, Troy, NY.]

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Shuffelton, Frank. Thomas Jefferson: A Comprehensive, Annotated Bibliography of Writings About Him (1826-1980). (New York: Garland Pub, 1983)

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State of Massachusetts. Acts and Laws of the Commonwealth of Massachusetts. (Boston: The Commonwealth, various dates)

State of New York. Laws of the State of New York. (Albany: The State, 1886-1887)

Syrett, Harold C. (ed). The Papers of Alexander Hamilton. 26 v. (New York: Columbia Univ. Press, 1961-1979)

United States. Congress. Biographical Directory of the United States Congress, 1774-1989. (Washington, DC: Government Printing Office, 1989)

United States. Congress. The Debates and Proceedings in the Congress of the United States.

United States. Library of Congress. Copyright Laws of the United States of America, 1783-1962. (Washington, DC: Government Printing Office, 1962)

United States. Library of Congress. Exchange and Gift Division. Monthly Checklist of State Publications. (Washington, DC: Government Printing Office, 1910-Date)

United States. Superintendent of Documents. Checklist of United States Public Documents, 1789-1975. 5 vols. (Washington, DC: Government Printing Office, 1975)

United States. Superintendent of Documents. Monthly Catalogue of United States Government Publications. (Washington, DC: Gov. Printing Office, 1895-Date)

United States. Patent and Trademark Office. Annual Report of the Commissioner of Patents and Trademarks. (Washington, DC: Gov. Printing Office, various years prior to 1920)

United States. Patent and Trademark Office Subject-matter Index of Patents for Inventions Issued by the United States Patent Office from 1790 to 1873, Inclusive. 3v. (Washington, DC: Gov. Printing Office, 1874)

Walch, Timothy (ed.). Celebrating the Constitution: A Bicentennial Retrospective. (Washington, DC: Nat. Archives Trust Fund Bd, 1988)

Patents Issued, 1790–1860

1790	3	1814	210	1838	531
1791	33	1815	173	1839	414
1792	11	1816	206		
1793	20	1817	174	1840	477
1794	22	1818	222	1841	511
1795	12	1819	156	1842	500
1796	44			1843	512
1797	51	1820	155	1844	510
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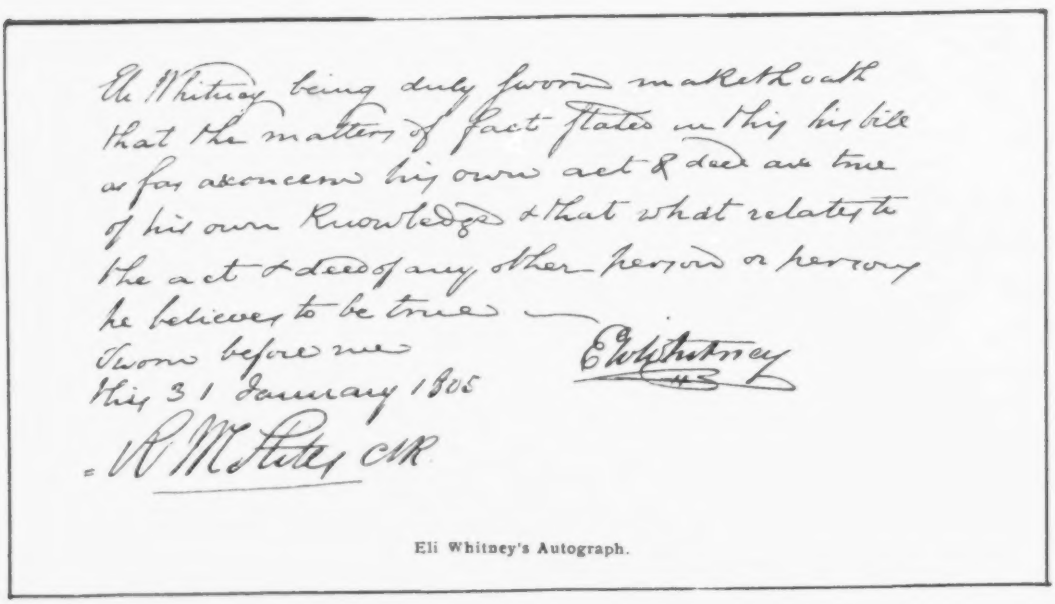
		1823	173	1847	576
1800	41	1824	228	1848	643
1801	44	1825	304	1849	1,050
1802	65	1826	323		
1803	97	1827	301	1850	986
1804	84	1828	368	1851	859
1805	57	1829	447	1852	914
1806	63			1853	956
1807	99	1830	544	1854	1,847
1808	158	1831	573	1855	1,992
1809	203	1832	474	1856	2,438
		1833	586	1857	2,822
1810	223	1834	630	1858	3,530
1811	215	1835	752	1859	4,314
1812	238	1836	700		
1813	181	1837	433	1860	4,588

Another type of valuable reference works are the journals published periodically by several historical organizations. Most college and large public libraries will have retrospective holdings of such academic journals as the Journal of American History (Organization of American Historians); The History Teacher (Society for History Education); Technology and Culture (Society for the History of Technology); the American Historical Review (American Historical Association); and the various journals of the state historical societies. This last group includes such titles as Rhode Island History, New York History, and the Connecticut Historical Society Bulletin.

Prologue, the journal of the National Archives, is also an important source of information. Not only does it provide a wide variety of articles but it also makes the reader aware of the many primary source documents related to the topic at hand.

Often of equal value to teachers of secondary students are the articles which appear from time to time in popular journals such as American Heritage, the Newcomen Society Transactions, and the National Geographic. A visit to a local public or college library will quickly reveal which popular journals are available outside the school. Complete retrospective collections are often available in microform at a very reasonable price and constitute a valuable reference resource for this and other topics.



Eli Whitney being duly sworn maketh oath that the matters of fact states in this his bill as far as concern his own act & deed are true of his own knowledge & that what relates to the act & deed of any other person or persons he believes to be true

Eli Whitney

Sworn before me
this 31 January 1805

R M Sutey CJR

Eli Whitney's Autograph.

- NON-PRINT RESOURCES -

As we move into the Twenty-first Century non-print materials will become even more important as information sources. To be effective teachers, or learners, we need to be aware of the non-print resources available on any given subject, access them, and use them efficiently.

Unfortunately, there is very little in the way of non-print material related to the subject of the first Congresses and the efforts of the new federal government to encourage excellence in science and engineering. The Institute for which this publication was prepared was meant to break new ground. Nowhere is this more apparent than in a search for non-print resources on the subject.

In the preparation of this compilation searches were made of a wide variety of commercial audio-visual catalogues covering every major publisher. In addition, the citations in the NICEM (National Information Center on Educational Media) Catalogue were searched. There is no quicker way to study the universe of media possibilities on a topic than by using the NICEM catalogue. However, NICEM does not catalogue all media productions and is quickly outdated. It is not uncommon for smaller agencies, and private groups, to produce materials which are uncatalogued. It is wise, therefore, to contact as many organizations as possible, museums in particular, which may produce non-print sources intended for limited audiences. It is also important to obtain as many current media production catalogues as possible. The elements of the following list are productions which could be considered appropriate to this Institute.

There are plenty of non-print materials on the Constitution and government. None, however, devote any significant time to the patent and copyright clauses, or other powers of the federal government, relative to the fostering of scientific and engineering excellence.

Far fewer non-print resources trace the history of science, engineering, or the teaching of those subjects during the Federalist Era; or any era. Steven Lubar, Curator of the Division of Engineering and Industry, National Museum of American History, Smithsonian Institution, and author of several books on the subject put it succinctly in a letter on January 4, 1989. "There's not very much available on that subject, I'm afraid," he said. Recent letters to publishers whose products are cited in the NICEM Catalogue reveal that some of the materials listed are no longer available for sale. They are likely still held in library media centers, however.

Clearly, individual teachers will need to make use of the audio-visual production facilities their schools offer. There is, then, a link between this section on non-print resources and the other sections of this publication. Many of the printed materials cited earlier contain useful illustrations which can be easily converted into a variety of media including overhead transparencies, projection transparencies (slides), videotape, and copied handouts.

While copyright restrictions should not be ignored teachers should avail themselves of their "fair use" privileges and make note of the fact that in many cases copyrights have expired.

Teachers seeking non-print materials should not forget the various government indexes to state and federal government productions. These are best accessed through the audio-visual support facilities of a federal installation or through the government documents section of a public or university library. Within each Congressional district at least one library is designated ass the Government Depository Library and receives one copy of every federal publication.

In addition, many videotape productions are better accessed through publications such as the Video Source Book or through the separate audio-visual catalogues of organizations related to the subject of this institute.

Among the latter is the Audio-Visual Materials Catalog of the American Institute of Architects (1989).

The single most important and relevant, although sparsely narrated, non-print resource is a videotape produced by the National Museum of American History in 1986. Entitled "Engines of Change," the tape contains moving and still images used in an exhibit of the same name at the Smithsonian Institution. In addition it includes approximately 300 images found in the course of research for the exhibition according to an information sheet prepared by the museum.

One of the more unique aspects of the tape, "Engines of Change," is that the museum provides a frame number index to it. The index also includes Smithsonian Institution Negative numbers which can be used to order single copies of given images. The tape is, then, a visual anthology and catalogue. Its cost is minimal by commercial standards; $24.95 at the time this publication went to press.

So authoritative are the producers of the tape, "Engines of Change," and so important is the list of images it includes, that the table of contents and index , provided by the Smithsonian Institution, are reproduced on the thirteen pages following this list of non-print resources. So sparse is the narration, however, that it would be wise for

any purchaser to have the following index handy at the time of viewing.

The following non-print resources fit the selection criteria of this compilation and its intended users.

_____. Engines of Change: The American Industrial Revolution, 1790-1860. (Washington, DC: Smithsonian Institution, 1985-6) Videotape. 1/2 inch. VHS. Color and Black and White. 25 min.

_____. From Dreams to Reality: A Tribute to Minority Inventors. (Washington, DC: US Dept. of Commerce, n.d.) 1/2 inch videocasette. VHS. Color. 26 min.

_____. [Historical Development of Trademarks.] US Trademark Assn. 2x2 Projection Transparencies. Color/B&W.

_____. Industrial Revolution in America. Series. (Chicago, IL: Coronet Instructional Films, 1978) "Historical Roots." 35 mm filmstrip. 68 frames. color.

_____. Industrialism in America: An Economic History. Series. "The Industrial Revolution Comes to the U.S." (Garden City, NY: Focus Media, 1988) Microcomputer program. Apple.

_____. Inventions and Technology That Shaped America. Set 1. "Eli Whitney Changes America--Cotton Gin." (NY: Learning Corp. of America, n.d.)

_____. Inventions that Made America. "Mass Production Industries." (n.p.: Multimedia Education, 1970) 35 mm filmstrip. 81 frames. color.

_____. The Factory Takes the Lead 1800-1860. (Wilton, CT: Current Affairs Films, n.d.) 35 mm filmstrip. cassette. 74 frames. color.

_____. The Industrial Revolution. (Garden City, NY: Focus Media, 1988) 1/2 inch videocasette. VHS. 37 min.

_____. Pawtucket: Cradle of American Industry. (Pawtucket, RI: Slater Mill Historic Site, n.d.) Videotape. 1/2 inch. VHS. [Based on slide program of same name.]

_____. The America of Currier and Ives. "From Sail to Steam." (Chicago, IL: Coronet Instructional Films, n.d.)

(Index to Visuals Included in "Engines of Change")

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Motion Pictures

Frame numbers	Index Numbers	Description	SI Negative numbers
00006-00014	000-001	Copyright notice and other information	
00017-09360	001-068	The John Bull (5-minute movie showing the John Bull locomotive in operation in 1981)	
09365-13475	068-098	Blanchard lathe (2-minute movie of the NMAH's copy of Springfield Armory's 1819 Blanchard lathe producing gunstocks.)	
13480-17270	099-125	John Howe's 1842 pin machine (2-minute movie of the machine in operation)	
17765-19455	129-140	Machine tool: Shaper built by Gould, Newark, New Jersey, c. 1860 (2-minute movie of the machine in operation)	
19458-22700	140-163	Machine tool: Bliss-Baldwin lathe, pre-1850 metalworking lathe built in New Hampshire (2-minute movie of the machine in operation)	
22705-26030	164-136	Machine tool: Planer, 1830s metal-working machine built By John H. Gage, Nashua, N.H. (2-minute movie of the machine in operation)	
26035-38450	187-270	"Engines of Change: From the Crystal Palace to an Industrialized America" (7-minute movie outlining American industrialization from 1850 to 1920)	
38501-43120	271-300	Philadelphia factories (50 images from the Library Company of Philadelphia's collection of tradecards showing Philadelphia factories. For more information, see Nicholas Wainwright, Philadelphia in the Romantic Age of Lithography [Philadelphia, 1958])	

Still pictures

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Index number 300		
43126	Map of US, showing states of 1790	
43128	Crystal Palace, US section, in map of United States, color	
43131	Land, painting by Latrobe	
43133	Road, painting by Latrobe	
43135	Port scene, 1790	
43137	Philadelphia street scene, 1790	
43145	Philadelphia, people, 1790	
43149	Slaves in field	
43153	Indians in Philadelphia	
43155	Niagara Falls, painting by Latrobe	
43157	Constitution	
43159	Iron works, painting by Latrobe, c. 1800	
Index number 301		
43161	Textiles, Slater's first mill, Pawtucket, RI, c. 1800	
43168	Tool chest, machinist's, c. 1870 (Loan from Daniel M. Semel)	
43173	Steam engine, Harlan and Hollingsworth, 1851	
43177	Steam engine, Oliver Evans, plans, 1804	43418-C
43181	Etzler's plans for "satellite"	
43185	Etzler's plans for "satellite," overall	
43189	Waterwheel, Evan's plans for	86-270
43193	Steam engine, Cridge, Wadsworth improved oscillating	
43197	Turbine, Boyden's outward flow, 1844, runner from	44304-B
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43204	Steam engine, Faber, 1850	
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44089	Machine shop at Norris Locomotive Works, 1850	86-269
44126	Machine shop, conjectural reconstruction of interior, c. 1855	4005B
44142	Machine tool, Robertson milling machine, 1851	P-65720
43722	Machine tool, lathe, c. 1830	P642354
43482	Machine tool, milling machine, Brown & Sharp, 1861	47023
44093	Machine tool, planing machine	86-267
43471	Machine tool, shaper, Gould and Eberhardt, 1854	73-280
44097	Machine tool, slide lathe	86-265
44101	Machine tool, slotting engine	86-264
44056	Machine, Howe's pin machine	85-7510
44130	Machine, press made by A. Alfred, 1850	86-1708
44134	Machine, press made by A. Alfred, 1850, detail	86-1709
43444	Machinery, Dolson's feed for paint mills	
43410	Machinery, Woodworth's planner	
43766	Machinery, nail-making machine, Brigeton, NJ	1052-11
43770	Machinery, nail-making machine, drawing of	82-3710
43313	Machinery, woodworking, J.A. Fay & Co., prize-winner at Crystal P	81-190
44102	Machinist's tool chest, c. 1870 (loan from Daniel M. Semel)	
43126	Map of US, showing states of 1790	
43317	McCormick's reaper, as shown at Crystal Palace	
43830	Medal from American Institute to Samuel Morse, 1842, obverse	79-13877
43834	Medal from American Institute to Samuel Morse, 1842, reverse	79-13876
43838	Medal from Franklin Institute, 1844, obverse	85-7601
43842	Medal from Franklin Institute, 1844, reverse	85-7602
43782	Men of Progress by Schussele, 1862 (Photo Nat. Portrait Gallery	
43418	Metalwork, advertisement of Edward W. Carr, Phila,	
44106	Micrometer, Brown and Sharpe # 1	74-9477
43924	National Road, Fairview Inn on, 1827 (Photo MD Hist Soc)	34,818-A
43928	National Road, mile marker	85-8678
43346	New York Crystal Palace	
43155	Niagara Falls, painting by Latrobe	
43732	Orrery, Rittenhouse, detail of Saturn arm	
43728	Orrery, Rittenhouse, now at Univ. of Pa.	
43260	Patent, Samuel Hopkins, for potash manufacture--first patent	80-4744
43406	Patents, office of American Patent Agency	

43137	Philadelphia street scene, 1790	
43145	Philadelphia, people, 1790	
43878	Phillipsburg Manor mill, Tarrytown, New York	85-9785
43309	Piano, Jacob Chickering piano advertisement	
43432	Pin machine, J.I. Howe, patent drawing, 1841, plan	
43436	Pin machine, J.I. Howe, patent drawing, 1841, view	
43372	Pins, American & Howe Pin Company	
43900	Pittsburgh, PA, from Eli Bowen, Pictorial Sketchbook of PA, 1852	
44118	Plan from Baldwin Locomotive Works, 1857	85-12968
43556	Plans from Baldwin Locomotive Works, 1857	85-12468
43560	Plans from Baldwin Locomotive Works, 1857	85-12467
43852	Plow, John Deere	33931A
43306	Plow, Prouty and Mears, prize-winner at Crystal Palace	
43276	Politics, "Jackson Ticket...Internal Improvement"	
43268	Politics, "Whigs Arouse," 1848	79-3588
43278	Politics, Henry Clay, w/ picture of mill (Photo Shelbourne Museum	
43256	Politics, J. Q. Adams campaign, "Peace, Liberty, Home Industry	52052
43264	Politics, J.Q. Adams, "Our Country . . . Home Industry,"	
43252	Politics, decanter engraved "The American System, HC", detail	80-14821
43822	Politics, decanter engraved "The American System, HC"	80-14820
43135	Port scene, 1790	
43534	Railroad track, Camden and Amboy RR	80-4952
44043	Railroad, Accident on the Camden & Amboy, 1855	5055
43564	Railroad, Camden and Amboy, running regulations on	81-6893
44010	Railroad, Camden and Amboy tracks with stone sleepers	21243-B
43508	Railroad, Japanese, sent from Norris Works, 1853	11060-A
43512	Railroad, Liverpool and Manchester, 1831	31112
43568	Railroad, Liverpool and Manchester, passenger car	8953
43570	Railroad, Liverpool and Manchester, cars and viaduct	8953
43986	Railroad, Liverpool and Manchester	31112
43552	Railroad, Providence and Worcester, businesses on route of	
44035	Railroad, Russian, built by American engineers (Photo NY Pub Lib)	
44014	Railroad, Stephens' drawing of track	80-4952
44047	Railroad, The Lackawanna Valley, Inness 1855(Photo Nat. Gal. Art)	
44039	Railroad, conductors, 1864	81-7635
43597	Ramelli, Dell' Artificiose Machine, piston pump	85-2112
43601	Ramelli, Dell' Artificiose Machine, book holder w/ spur gears	76-14435
43605	Ramelli, Dell' Artificiose Machine, lantern and worm gears	85-2111
43609	Ramelli, Dell' Artificiose Machine, cam	83-2113
43303	Reaper, McCormick, as shown at 1851 Crystal Palace	
44200	Regulations, Lawrence Manufacturing Company	
43478	Regulations, Taunton Locomotive Co (Photo Old Colony Hist. Soc)	
43696	Restored iron furnace at Hopewell Village, PA	
43726	Rifle, Pennsylvania	79-7928
43376	Rifle, detail of "WAT" cartouche	86-2569/1
43133	Road, painting by Latrobe	
44312	Roebling's suspension bridge building apparatus, drawing	
44309	Roebling, John A., Harper's New Monthly Magazine, May 1887, p.925	
44114	Rules, Taunton Locomotive Mfg. Co. (Photo Old Colony Hist. Soc.)	
43706	Sawmill, Chester County, PA (Photo HABS, Library of Congress	
43350	Sculpture pointer at work	
43237	Sewing machine	
43245	Pawtucket, RI, from White, Memoir of Samuel Slater, 1836	
44236	Sewing machine	45513-B

43212	Sewing machine, Blodgett and Lerow, 1849 patent model	
43241	Sewing machine, Howe patent model	
43233	Sewing machine, Singer patent model	
44296	Shaker broom, broom-making machine (Photo Hancock Shaker Village)	
44297	Shaker chair w/ tilt mechanism in leg, detail	85-4698/30
43677	Shipyard, Smith & Dimon, by Pringle (Photo NY State Hist. Assoc)	
43474	Shoe-makers' 10-footer, exterior, Lynn, MA	
44228	Shoemaker's factory, Lynn, MA	
44224	Shoemaker's shop, interior of 10-footer	
43207	Silk-reeler, Adam Brook's, patent model	80-16792
43380	Slater, Samuel, from White, Memoir of Slater, 1836	
43736	Slater, Samuel, portrait from White, Memoir of Samuel Slater	34795
43149	Slaves in field	
43916	Stagecoach	78-1870
43920	Stagecoaches, "New Line of Stages" advertisement	10,899-B
43193	Steam engine, Cridge, Wadsworth improved oscillating	
43204	Steam engine, Faber, 1850	
43426	Steam engine, Harlan & Hollingsworth, 1851,	43705
43173	Steam engine, Harlan and Hollingsworth, 1851	
43628	Steam engine, Newcomen (1703 engraving)	79-7308
43762	Steam engine, Newcomen, cylinder from Schyler engine, NJ, 1750s	31704
43632	Steam engine, Newcomen, from Desaguliers, Course of Exper. Phil.	79-7310
43636	Steam engine, Newcomen, schematic, from Pursell, Early Stat. S.E.	
43758	Steam engine, Newcomen-type, by John Fitch, 1785	46264
43177	Steam engine, Oliver Evans, plans, 1804	43418-C
43961	Steam engine, Oliver Evan's Columbian steam engine, 1813	
43637	Steam engine, Watt, model at NMAH	P64118
43641	Steam engine, Watt, schematic, from Pursell, Early Stationary SE	
44065	Steam engine, built by F & WM Faber, Pittsburgh, c. 1850	81-2977
44081	Steam hammer, Nasmyth, shown at Smithsonian 1876 exhibition	79-10315
43624	Steam wheel from G. Branca, La Machine (1629)	79-7311
43965	Steamboat, Buckeye State, 1841, Mississippi steamboat (model)	P63146-A
43937	Steamboat, Fitch model, 1785	
43809	Steamboat, Fitch's 1791 patent drawing	45539
43957	Steamboat, Fulton's Chancellor Livingston, 1815 (model)	45612K
43812	Steamboat, Fulton's, sketch of engine (Photo Birmingham Pub. Lib)	
43941	Steamboat, James Rumsey water tube boiler (Phot MD Hist Soc)	
43945	Steamboat, Rumsey jet boat, 1788 (Photo MD Hist. Soc.)	
43953	Steamboat, Steven's engine for Little Juliana	44303-A
43949	Steamboat, Steven's twin-screw boat Little Juliana	38803-A
43452	Steamboats at Cincinnati (Photo Library of Congress	
43982	Stevens, Robert Livingston (Photo National Portrait Gallery)	
43282	Tarriff--petition to Congress (Photo National Archives)	
43816	Telegraph recorder, Morse's, replica	29647
43818	Telegraph, Morse's canvas-stretcher	74-2444
43294	Textiles, Amoskeag Manufacturing Co. advertisement	
44147	Textiles, Bedworth Mill, England, c.1800(Photo Fitzroy Newdegate)	
43230	Textiles, British textile mill drawing (Photo from Mr. Newdegate)	
43740	Textiles, Carding machine, Samuel Slater's, 1790s	45060
43752	Textiles, Carding machine, Scholfield's	42833
43778	Textiles, Danforth flyer, patent drawing (Photo National Archive)	
44183	Textiles, Lowell, MA textile mills	58219
44179	Textiles, Merrimack Mfg. Co. twisting frame	71383
43214	Textiles, Merrimack Mills, Lowell (Photo from Univ. of Lowell)	

43428	Textiles, Merrimack spinning frame, 1840s	71382
43748	Textiles, Slater mill,Pawtucket RI (Photo Slater Mill Hist. Site)	
44163	Textiles, Slater yarn prices,1802(Photo American Antiquarian Soc)	
43161	Textiles, Slater's first mill, Pawtucket, RI, c. 1800	
43744	Textiles, Spinning frame, Samuel Slater's, 1790s	74-3546
43774	Textiles, Thorp rotary spindle, patent drawing (Photo Nat. Arch)	
43248	Textiles, advertisement for Pearce Cotton Gins	
44187	Textiles, carding machine (Photo Mus. of Amer. Textile History)	
44151	Textiles, domestic spinning jenny	80-4316
43653	Textiles, drop spindle (Photo Museum of American Textile History)	
43645	Textiles, fulling mill, 1607	75-5705
43649	Textiles, hand loom (Photo Museum of American Textile History)	
44159	Textiles, home silk reeler	80-16792
43756	Textiles, loom, power, c. 1868 (Photo Museum of Amer. Text. Hist)	
43665	Textiles, mule spinner, English (Photo Ironbridge Museum	
44155	Textiles, plantation spinner, c. 1840	45929
44191	Textiles, power loom (Photo Museum of American Textile History)	
44175	Textiles, power loom, Lowell, MA(Photo Mus. of Amer. Text. Hist.)	
43222	Textiles, power loom, Markham drawing (Photo from Sheldon Museum)	
43226	Textiles, power loom, Markham drawing (Photo from Sheldon Museum)	
43657	Textiles, spinning jenny (Photo Library of Congress)	
43661	Textiles, spinning wheel (Photo Museum of American Textile Hist)	
44196	Textiles, timetable Lowell mills(Photo Mus. of Amer. Text. Hist.)	
44167	Textiles, weave room, c. 1850 (Photo George Eastman House	
44192	Textiles, women w/ shuttles(Photo Mus. of Amer. Textile History)	
43168	Tool chest, machinist's, c. 1870 (Loan from Daniel M. Semel)	
43351	Tools, Spirit Level ad,	86-4136
43488	Train wreck	21199
43491	Train wreck	12664
43933	Transportation, Lockport on the Erie Canal	57091
43932	Transportation, New Haven and Northampton canal line ad, 1845	48617
43197	Turbine, Boyden's outward flow, 1844, runner from	44304-B
43201	Turbine, James B. Francis, experimental runner, 1847	44304-F
44292	Utopian community, Owen's The Crisis, w/ plan of community, 1832	
44285	Watch made by American Watch Company, Waltham, MA, 1868	74-6186
43368	Watch, used by conductors on Camden and Amboy RR	76-5922
44057	Waterpower, Evan's drawings of types of waterwheels	
44061	Waterpower, plan of turbine from at Boott cotton mills, Lowell	
43189	Waterwheel, Evan's plans for	86-270
43218	Waterwheel, at Machine Shop, Lowell (Photo from Univ. of Lowell)	
44171	Webster, MA	
43586	Webster, Massachusetts	
43388	Whitney, Eli	
43688	Whitney, Eli	649-G
43680	Wooden hinges	85-8670
43684	Wooden trammel	85-8669
44051	Worker, Pin maker (woman)	55515
44257	Workers at Seth Hoadley clock factory (Photo Mattatuck Museum)	
43354	Workers, Bonnet and Hat Bleachery ad	
44220	Workers, women, from Harpers, c. 1860	81-13694

- NATIONAL ARCHIVES AND RECORDS ADMINISTRATION -

On April 1, 1985 the National Archives and Records Administration became an independent federal agency. As an important repository of primary source material the Archives are an important resource for teachers. Beyond their scholarly quarterly journal, Prologue, however the Archives do not disseminate much of their material. The patron must go to the main Archive in Washington, DC or to one of the several regional repositories.

Originally set up to provide secure storage and access to the permanently valuable records of the United States government, the National Archives has been tasked with additional, often difficult, confusing, and sometimes contradictory duties in the years since they were first established in 1934. In addition to responsibility for the preservation, display, use, appraisal and disposition of permanently valuable federal records, the Archives is also charged with the operation of seven Presidential Libraries, the custody of the Nixon and Carter Presidential historical materials, administration of 15 regional Records Centers and the publication of legislation, regulations, Presidential and other related materials. Such materials include the publications supported in whole or in part by the National Historical Publications and Records Commission. In recent years such publications have included the Documentary Histories of the First Federal Congress, the Supreme Court, and the Ratification of the Constitution.

A list of National Archives and Records Administration operational sites is provided on the next page. The amount of material any given site would have on the specific topic of this Institute may be small. However, it is likely that most of the archives and records centers could offer a broad range of possible resource documents useful for teaching about the relationship of the federal government to the promotion of excellence in science and engineering. Certainly, they would each have a great many documents useful to teachers concerned with teaching about the Constitution generally.

The patent record collection of the National Archives is held by the Scientific, Economic and Natural Resources Branch (NNFN)

The National Historical Publications and Records Commission can be contacted at the National Archives Building, Washington, DC 20408. The Commission publishes a limited circulation newsletter, Annotation.

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

NATIONAL ARCHIVES

Central Information Division
National Archives
Washington, DC 20408
Telephone 202-523-3220

National Archives—Boston Branch
380 Trapelo Road
Waltham, MA 02154
617-647-8100

National Archives—New York Branch
Building 22—Military Ocean Terminal
Bayonne, NJ 07002
201-823-7252

National Archives—Philadelphia Branch
9th and Market Streets
Philadelphia, PA 19107
215-597-3000

National Archives—Atlanta Branch
1557 St. Joseph Avenue
East Point, GA 30344
404-763-7477

National Archives—Chicago Branch
7358 South Pulaski Road
Chicago, IL 60629
312-581-7816

National Archives—Kansas City Branch
2312 East Bannister Road
Kansas City, MO 64131
816-926-7271

National Archives—Forth Worth Branch
501 West Felix Street, P.O. Box 6216
Fort Worth, TX 76115
817-334-5525

National Archives—Denver Branch
Building 48, Denver Federal Center
Denver, CO 80225
303-236-0818

National Archives—Los Angeles Branch
24000 Avila Road, P.O. Box 6719
Laguna Niguel, CA 92677-6719
714-643-4220

National Archives—San Francisco Branch
1000 Commodore Drive
San Bruno, CA 94066
415-876-9009

National Archives—Seattle Branch
6125 Sand Point Way NE
Seattle, WA 98115
206-526-6507

PRESIDENTIAL LIBRARIES

Herbert Hoover Library
P.O. Box 488
West Branch, IA 52358
Telephone 319-643-5301

Franklin D. Roosevelt Library
259 Albany Post Road
Hyde Park, NY 12538
Telephone 914-229-8114

Harry S. Truman Library
Independence, MO 64050
Telephone 816-833-1400

Dwight D. Eisenhower Library
Abilene, KS 67410
Telephone 913-263-4751

John F. Kennedy Library
Columbia Point
Boston, MA 02125
Telephone 617-929-4500

Lyndon Baines Johnson Library
2313 Red River
Austin, TX 78705
Telephone 512-482-5137

Nixon Presidential Materials Staff
Office of Presidential Libraries
National Archives
Washington, DC 20408
Telephone 703-756-6498

Gerald R. Ford Library
1000 Beal Avenue
Ann Arbor, MI 48109
Telephone 313-668-2218

Jimmy Carter Library
One Copenhill Avenue
Atlanta, GA 30307
Telephone 404-331-3942

FEDERAL RECORDS CENTERS

Federal Records Center—ATLANTA
1557 St. Joseph Ave.
East Point, GA 30344
Telephone 404-763-7476

Federal Records Center—BOSTON
380 Trapelo Rd.
Waltham, MA 02154
Telephone 617-647-8745

FEDERAL RECORDS CENTERS

Federal Records Center—CHICAGO
7358 South Pulaski Rd.
Chicago, IL 60629
Telephone 312-353-0164

Federal Records Center—DAYTON
3150 Springboro Road
Dayton, OH 45439
Telephone 513-225-2878

Federal Records Center—DENVER
P.O. Box 25307
Bldg 48, Denver Federal Center
Denver, CO 80225
Telephone 303-236-0804

Federal Records Center—FORT WORTH
Box 6216
Fort Worth, TX 76115
Telephone 817-334-5515

Federal Records Center—KANSAS CITY
2312 East Bannister Rd.
Kansas City, MO 64131
Telephone 816-926-7271

Federal Records Center—LOS ANGELES
24000 Avila Rd.
Laguna Niguel, CA 92677
Telephone 714-643-4220

Federal Records Center—NEW YORK
Bldg. 22, Military Ocean Terminal
Bayonne, NJ 07002
Telephone 201-823-7161

Federal Records Center—PHILADELPHIA
5000 Wissahickon Ave.
Philadelphia, PA 19144
Telepnone 215-951-5588

Federal Records Center—ST. LOUIS
National Personnel Records Center
9700 Page Blvd.
St. Louis, MO 63132
Telephone 314-263-7201

Federal Records Center—SAN FRANCISCO
1000 Commodore Dr.
San Bruno, CA 94066
Telephone 415-876-9003

Federal Records Center—SEATTLE
6125 Sand Point Way, NE
Seattle, WA 98115
Telephone 206-526-6501

Federal Records Center—WASHINGTON
Washington National Records Center
Washington, DC 20409
Telephone 301-763-7000

- HISTORIC AMERICAN ENGINEERING RECORD and HISTORIC AMERICAN BUILDINGS SURVEY -

The Historic American Engineering Record, and the Historic American Buildings Survey comprise an invaluable source of both print and non-print information relative to the purpose of this institute. They are programs of the Library of Congress pursued in concert with the National Park Service and with the cooperation of state, local, and private agencies.

The Historic American Engineering Record is comprised of measured drawings, large photographs, and written reports all of which can be accessed through the Prints and Photographs Division of the Library of Congress (Washington, DC 20540). The records held by the Engineering Record have no copyright. The Record holds more than 1400 measured drawings, 18,000 photographs (many of early industrial sites), and 13,000 pages of data.

The Historic American Buildings Survey is similar to the Engineering Record but, as the name implies, is concerned with buildings rather than canals, aqueducts, and similar structures. An older program which can be considered a forerunner of the National Register of Historic Sites, the Building Survey holds 43,000 measured drawings, 93,000 photographs, and 44,000 pages of data.

The material included in the Buildings Survey, including photographs, is available in microfiche format. The microfiche are not produced by the government but are available from Chadwyck-Healey, Inc; 1101 King St, Alexandria, VA 22314. While the entire collection would cost $5,500 (1988 price) it is possible to purchase fiche for individual state collections. The entire collection consists of 1,567 60-frame positive fiche.

The following printed materials relate directly to the Historic American Engineering Record or the Historic American Buildings Survey. They contain many photographs and drawings. Thus, they are also significant non-print resources. In addition, they comprise a guide to the sites which have yielded the thousands of photographs mentioned previously.

Comp, T. Allen. New England: An Inventory of Historic Engineering and Industrial Sites. (Washington, DC: Government Printing Office, 1974)

Comp, T. Allen and Hoeft, Kathleen S. (eds). Long Island Wind and Tide Mills--An Interim Report. (Setauket, NY: Society for the Preservation of Long Island Antiquities, n.d.)

DeLony, Eric; Boone, Ellen and Keyes, Alice (comps). Historic American Engineering Register Checklist: 1969-1985. (Washington, DC: Government Printing Office, 1985)

Glass, Brent D. (ed). North Carolina: An Inventory of Historic Engineering and Industrial Sites. (Raleigh, NC: North Carolina Div. of Archives and History, 1975)

Kulik, Gary. Rhode Island: An Inventory of Historic Engineering and Industrial Sites. (Providence, RI: Rhode Island Historical Preservation Commission, 1976)

Molloy, Peter M. (ed). Lower Merrimack River Valley: An Inventory of Historic Engineering and Industrial Sites. (North Andover, MA: Merrimack Valley Textile Museum, 1976)

Sackheim, Donald E. (comp). Historic American Engineering Record Catalog, 1976. (Washington, DC: Government Printing Office, 1976)

Stamm, Alicia D. (comp) and Peatross, C. Ford (ed). Historic America: Buildings, Structures, and Sites. (Washington, DC: Government Printing Office, 1983)

Stott, Peter H. (ed). Long Island: An Inventory of Historic Engineering and Industrial Sites. (Setauket, NY: Society for the Preservation of Long Island Antiquities, 1974)

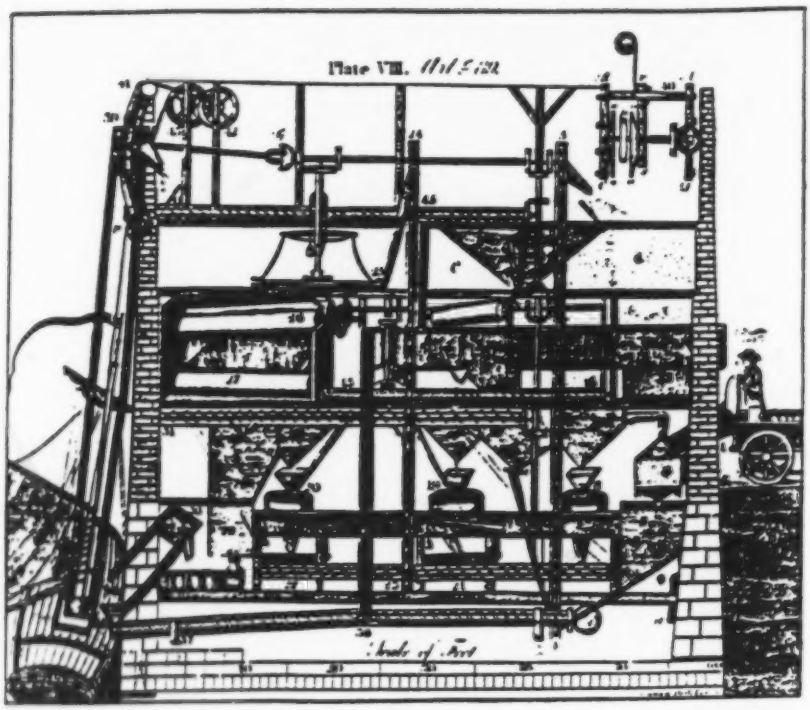
Thomas, Selma (ed). Delaware: An Inventory of Historic Engineering and Industrial Sites. (Wilmington, DE: Eleutherian Mills-Hagley Foundation, 1975)

United States. Historic American Buildings Survey. Catalog Supplement, Catalog of the Measured Drawings and Photographs of the Survey in the Library of Congress, Comprising Additions Since March 1, 1941. (Washington, DC: Government Printing Office, 1959)

United States. Historic American Buildings Survey. Catalog of the Measured Drawings and Photographs of the Survey in the Library of Congress. (Washington, DC: Government Printing Office, 1941)

Vogel, Robert M. (ed). A Report of the Mohawk-Harlem Area Survey. (Washington, DC: Smithsonian Institution, 1973)

Vogel, Robert M. (ed). Report on the Mohawk-Hudson Area Survey. (Washington, DC: Smithsonian Institution, 1969)



A flour mill from an engraving in Oliver Evans's *The Young Mill-wright and Miller's Guide*

- ORGANIZATIONS -

There are several organizations which can provide information for teachers interested in the history of technology, antiquarian tools, and the development of scientific thought. Some of these organizations are able to provide substantial assistance to teachers and researchers depending on the nature of the inquiry. In a few cases assistance is only available on site. A listing of the most important organizations is provided here.

American Antiquarian Society
185 Salisbury Street
Worcester, MA 01609

American Institute of Architects
1735 New York Avenue
Washington, DC 20006

American Society for Engineering Education
11 Dupont Circle, Suite 200
Washington, DC 20036

Early American Industries Association
PO Box 2128
Empire State Plaza Station
Albany, NY 12220-0128

Engineering Societies Library
345 East 47th Street
New York, NY 10017

History of Science Society
Museum of American History, Rm. 5000
Smithsonian Institution
Washington, DC 20560

Institute for the Advancement of Engineering
PO Box 26247
Los Angeles, CA 90026

Newcomen Society of the United States
412 Newcomen Road
Exton, PA 19341

Patent and Trademark Office Society
PO Box 2089
Arlington, VA 22202

Public Works Historical Society
1313 East 60th Street

Chicago, IL 60637

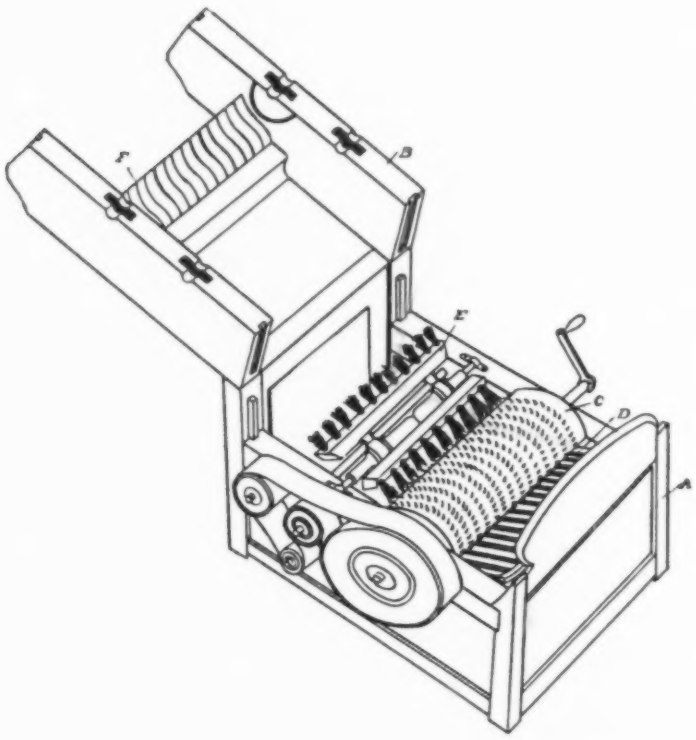
Society for the History of Technology, Rm 5707
National Museum of American History
Smithsonian Institution
Washington, DC 20560

Society for Industrial Archeology
Museum of American History, Rm. 5020
Smithsonian Institution
Washington, DC 20560

United States Trademark Association
6 East 45th Street
New York, NY 10017

Young Scientists of America Foundation
PO Box 9066
Phoenix, AZ 85068

Teachers with interests broader than the scope of this Institute can find a wide range of organizations listed, together with points of contact, in the Encyclopedia of Associations, 2 vols, published by Gale Research and available in most public and college libraries.



- PATENT RESEARCH -

Most of the patent research undertaken today serves the purposes of inventors, technologists, and attorneys. Using patent information to stimulate historical or scientific thinking, including the philosophical bases of those areas of study, may be a productive avenue of approach for teachers. While patent information is readily available to the general public, however, the means by which it is accessed is not generally known.

Under the Patent Law of 1790 little was required the government to keep little in the way of information about an invention. Under later laws drawings, specifications, and models were required. So valuable were these materials considered, so the story goes, that Dr. William Thornton, first head of the first Patent Office, made a personal plea to the invading British commander to spare them from destruction in 1814. Unfortunately, an 1836 fire managed to destroy what the British did not. Nevertheless, a great deal about early patents is still available; much of it collected in patent depositories and adjunct materials the the National Archives.

Sixty-two Patent Depository Libraries are located throughout the United States. These libraries are open to the public and contain a vast amount of information. Much of it, admittedly, is on contemporary inventions. All of it, however, can be important in illustrating the history of technology or the efforts of the government to stimulate creativity.

The names, addresses and locations of the Patent Depository Libraries follow this introduction. Some of these are public libraries, some are university libraries, a few are state libraries, and a few are specialized research libraries. The amount of information about patents and "intellectual property" that any library contains will be directly related to the type of patrons the library is designed to served.

Most Patent Depository Libraries produce a research aid which can be extremely valuable to inexperienced users. In addition, they usually provide access to the various patent guides produced by the federal government over the years. The most useful of those guides are cited in the "Reference Works" section of this publication.

Some small amount of patent research can be done in the archives of the original states. During the Confederation period Congress had urged the states to enact their own

patent laws. Under those laws states such as Massachusetts, New York, Connecticut, and South Carolina granted patents by statute. While copies of session laws dating from the 1780's are sometimes available in local government archives and law libraries they are most readily accessible in a state research centers.

An example of a pre-1790 state patent is the statutory protection given to steam engine inventor James Rumsey by the New York State Legislature in 1789. Rumsey's lengthy state patent grant is reproduced on the pages following the Patent Depository Libraries locator.

LAWS
OF
NORTH CAROLINA.

At a General Assembly, begun and held at Raleigh, on the fifteenth Day of November, in the Year of our Lord one Thousand Eight Hundred and two, and in the Twenty-seventh Year of the Independence of the said State.

JAMES TURNER, ESQUIRE, GOVERNOR.

CHAP. I.

An Act to carry into effect a Contract between the State of North Carolina, and Phineas Miller and Eli Whitney.

WHEREAS Eli Whitney, the inventor and patentee of a machine for cleaning cotton from the feeds, commonly called a Saw-Gin, has propofed and offered, in behalf of himself and Phineas Miller, aſſignee, of one moiety of the patent-right to faid machine, to fell to the State of North-Carolina, the ſole and exclusive right of making, uſing and vending the faid machine within the limits of this State: And whereas the cultivation of cotton is increaſing in this State, and from the invention and uſe of faid machine, likely to become a valuable ſtaple article of exportation, it is expedient that the State of North Carolina do purchaſe from the faid Miller and Whitney, the patent-right to the making, uſing and vending the faid new invention of a machine for cleaning cotton from its feeds, commonly called a Saw-Gin, on the terms and conditions hereinafter mentioned; that is to ſay, that there ſhall be laid and collected by the State of North-Carolina, on each and every ſaw-gin which ſhall be uſed in this State, between the paſſing of this act and the firſt day of April next, a tax of two ſhillings and ſixpence upon every ſaw, or annular row of teeth, which ſuch gin may contain; and a tax of two ſhillings and ſixpence for each and every ſaw, or annular row of teeth, which ſhall be uſed in ſaid gins, in each and every year, for the term of five years thereafter. Provided, that the aforeſaid Miller and Whitney, before they ſhall receive, or be entitled to receive any of the money collected by virtue of this act, ſhall produce their patent-right aforeſaid, and ſatisfy the Treaſurer that they are the true proprietors of the ſame; which tax, when collected, to be paid to the ſaid Miller and Whitney, or their order, firſt deducting the Sheriff's uſual commiſſions of ſix per cent. for collection, from year to year for the term aforeſaid: The firſt payment to be made on the firſt day of December, in the year of our Lord one thouſand eight hundred and three, and the laſt payment on the firſt day of November, in the year of our Lord one thouſand eight hundred and eight: For which purpoſe,

Be it enacted by the General Aſſembly of the State of North-Carolina, and it is hereby enacted by the authority of the ſame, That the good faith of the State be, and the ſame is hereby declared to be pledged for the due collection of the faid tax for the term aforeſaid, and for the regular payment thereof, from year to year, on the day and days before mentioned; and for the paſſing of ſuch laws as may be neceſſary for the due and the faithful collection and payment of ſaid tax, and for the purpoſe of carrying this contract into effect, according to its true intent and meaning.

II. And be it further enacted, That all perſons who ſhall uſe, from and after the paſſing of this act, any ſaw-gin, ſhall make return thereof to the firſt county court which ſhall be held in each and every county of this State, after the firſt day of February next; which return ſhall be made on oath, to be adminiſtered by ſome Juſtice of the

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PATENT DEPOSITORY LIBRARIES

(1) Albany, NY - New York State Library
(2) Albuquerque, NM - University of New Mexico Library
(3) Ann Arbor, MI - Engineering Transportation Library, University of Michigan
(4) Atlanta, GA - Price Gilbert Memorial Library, Georgia Institute of Technology
(5) Auburn University, AL - Auburn University Libraries
(6) Austin, TX - McKinney Engineering Library, University of Texas at Austin
(7) Baton Rouge, LA - Troy H. Middleton Library, Louisiana State University
(8) Birmingham, AL - Birmingham Public Library
(9) Boston, MA - Boston Public Library
(10) Buffalo, NY - Buffalo and Erie County Public Library
(11) Butte, MT - Montana College of Mineral Science and Technology Library
~~(12) Gettysburg-Gettysburg, PA - Alliance College Library~~
(13) Charleston, SC - Medical University of South Carolina Library
(14) Chicago, IL - Chicago Public Library
(15) Cincinnati, OH - Public Library of Cincinnati and Hamilton County
(16) Cleveland, OH - Cleveland Public Library
(17) College Park, MD - Engineering and Physical Sciences Library, University of Maryland
(18) College Station, TX - Sterling C. Evans Library, Texas A & M University
(19) Columbus, OH - Ohio State University Libraries
(20) Dallas, TX - Dallas Public Library
(21) Denver, CO - Denver Public Library
(22) Detroit, MI - Detroit Public Library
(23) Durham, NH - University of New Hampshire Library
(24) Houston, TX - Fondren Library, Rice University
(25) Indianapolis, IN - Indianapolis-Marion County Public Library
(26) Kansas City, MO - Linda Hall Library
(27) Lincoln, NE - Engineering Library, University of Nebraska-Lincoln
(28) Los Angeles, CA - Los Angeles Public Library
(29) Madison, WI - Kurt F. Wendt Engineering Library, University of Wisconsin
(30) Memphis, TN - Memphis & Shelby County Public Library and Information Center
(31) Milwaukee, WI - Milwaukee Public Library
(32) Minneapolis, MN - Minneapolis Public Library and Information Center
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(38) Pittsburgh, PA - Carnegie Library of Pittsburgh
(39) Providence, RI - Providence Public Library
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(44) Salt Lake City, UT - Marriott Library, University of Utah
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(46) Seattle, WA - University of Washington Libraries
(47) Springfield, IL - Illinois State Library
(48) Stillwater, OK - Oklahoma State University Library
(49) Sunnyvale, CA - Patent Information Clearinghouse*
(50) Tempe, AZ - Arizona State University Libraries
(51) Toledo, OH - Toledo/Lucas County Public Library
(52) University Park, PA - Pattee Library, Pennsylvania State University Libraries
(53) Miami, FL - Miami - Dade Public Library
(54) Fort Lauderdale, FL - Fort Lauderdale, Broward County Main Library
(55) Amherst, MA - University of Massachusetts Library
(56) Anchorage, AK - Anchorage Municipal Library
(57) Little Rock, AR - Little Rock, Arkansas State Library
(58) Salem, OR - Oregon State Library
(59) Nashville, TN - Vanderbilt University Library
(60) Richmond, VA - Virginia Commonwealth University Library
(61) Philadelphia, PA - The Free Library of Philadelphia
(62) IRVINE, CA - University of California-Irvine General Library
(63) NEW HAVEN, CT - Science Park Library

□ City or City/County Public Library
○ College or University Library
○ State Library
▢ Research-Oriented Library

(Extract from Session Laws of New York, 1789)

any road or roads, or any part of any road or roads in or towards any part make as the said commissioners shall contract with, well and sufficiently to of the lands now belonging to the people of this State, or to make and erect any bridge or bridges, upon any road or roads, in or towards such land, as the said commissioners in their discretion, may direct to be laid out or erected; which lands shall be granted in such proportions, as the said commissioners shall for that purpose contract for, and direct; and that the said commissioners, before letters patent shall be issued for such lands, shall direct the surveyor general to examine the said roads and bridges, and if the said surveyor general shall report, that such roads and bridges are well and sufficiently made, then letters patent shall issue to the persons who shall have made the same, for such part thereof, and in such proportions, as the said commissioners shall have agreed to grant the same, for making the said roads or bridges.

And be it further enacted by the authority aforesaid, That it shall and Id. may be lawful to and for the commissioners of the land office in their discretion, to direct the surveyor general to survey and lay out one or more tracts of land, between the river St. Lawrence and Lake Champlain, to contain in the whole not more than twenty five thousand acres, and to divide the same at the expence of the State; such lands to be granted, in the manner, and under the like provisions contained in the last preceding clause, to such persons who shall well and sufficiently make such roads, in that part of the State, lying between the river St. Lawrence, Lake George and Lake Champlain, as the said commissioners may think proper to direct.

CHAP. 33.

AN ACT securing to James Rumsey the sole right and advantage of making and employing for a limited time, the several mechanical improvements by him lately invented.

PASSED the 26th of February, 1789.

WHEREAS James Rumsey of Berkley county in Virginia hath represented to the legislature of this State that he hath invented or improved divers engines and machines upon principles and constructions not heretofore known or used that is to say, a new and easy method of generating steam in large quantities for the purpose of working engines by forcing a small quantity of water through one or more incurvated tubes placed in a furnace which tube or tubes is distinguished by the name of a pipe boiler; a new and easy method of raising water in great quantities to any height that may be nesessary for any mechanical or other useful purpose by means of steam acting upon and moving two pistons at the same time whereby the weight of one or more atmospheres may be applyed for raising water in one trunk or tube, which improvement the said James Rumsey hath distinguished by the name of a pump piston machine; a new improvement upon Doctor Barkers mill, a mode by which millstones and other machinery requiring a circular motion may be turned by or worked with a smaller quantity of water than by any plan yet exhibited to the public, and entirely free from the difficulties which prevented Docter Barkers invention from coming into use. A new and easy mode of working mill saws or any other machinery requiring alternately an opposite motion by applying the whole weight Preamble.

(Extract from Session Laws of New York, 1789)

or force of the water used alternately to a piston moving in a cylinder which improvement is distinguished by the said James Rumsey by the name of a cylindric saw mill; a new mode of raising water by means of steam acting upon a piston floating on the surface of the water in a trunk or cylinder whereby water may be driven or forced up another trunk or tube to any height not exceeding thirty three feet and by repeating the machinery, may be raised from thence to any other height.

And whereas the said James Rumsey hath prayed that an act may pass granting to him, his executors, administrators, and assigns, the sole and exclusive right of making and using or permitting others to make and use the above recited engines and mechanical improvements for a certain limitted time. Wherefore to encourage every useful improvement and discovery, and as a reward for his ingenuity.

Models to be lodged in secretary's office

Be it enacted by the People of the State of New York, represented in Senate and Assembly and it is hereby enacted by the authority of the same, That the said James Rumsey in his own proper person or by his certain attorney shall within nine months after the passing of this act lodge in the secretary's office of this State such specimens, draughts or models of the above recited machines and inventions as shall clearly and fully distinguish and ascertain their form and the principles upon which they operate.

Monopoly given to James Rumsey.

And be it further enacted by the authority aforesaid That as soon as the said James Rumsey by himself or his certain attorney shall lodge such draughts specimens or models in the Secretary's office in such manner and within such time as is herein before directed that then the said James Rumsey his executors, administrators and assigns shall be and they are hereby vested with the sole and exclusive right of making and using or granting to others the right of making and using the above recited engines machines and mechanical improvements for and during the full end and term of fourteen years from and after the end of the present session of the legislature, in any place within this State.

Penalty for unauthorized use of inventions.

And be it further enacted by the authority aforesaid, That if any person or persons whomsoever without being properly authorised by him the said James Rumsey his executors or administrators shall make use or employ any of the herein before recited engines machines or mechanical improvements constructed upon the principles herein before mentioned every person or persons so offending against the true intent and meaning of this act for each and every such offence shall forfeit and pay unto the said James Rumsey his executors or administrators, or to such other person or persons as he the said James Rumsey his executors, administrators or assigns shall authorise and empower for that purpose the sum of one hundred pounds to be recovered by action of debt in any court of record within this State wherein the same may be cognizable with costs of suit.

Act, how construed.

And be it further enacted by the authority aforesaid, That neither this act nor any thing therein contained shall be taken deemed or construed to prohibit or prevent any person or persons from making using and constructing any engines, machines or mechanical improvements heretofore invented or hereafter to be invented which may be constructed on any other principles than those herein before recited.

- ABOUT THE COMPILER -

Dr. Preston E. Pierce has, for 23 years, been a classroom teacher of secondary social studies (grades 7-12) in Pennsylvania and New York. Since 1983 he has also been the County Historian for Ontario County, New York.

After receiving his BA in History from Westminster College (Pa), Dr. Pierce attended the University of Vermont where he received his MAT, also in History. In addition, Dr. Pierce has attended the State University of New York Colleges at Brockport (MSEd, CAS: Educational Administration) and Geneseo (MLS: Library and Information Science). In 1979 the New York State Board of Regents awarded Dr. Pierce a BS (External Degree) in Political Science. In 1984 he received the EdD (Curriculum/Social Science) from the University of Rochester. He is currently working on a PhD in history and an MS in Instructional/Performance Technology.

Holding the rank of Major in the US Army Reserve, Dr. Pierce is a graduate of the US Army Command and General Staff College and has served in the Corps of Engineers, the Field Artillery, the Civil Affairs branch, and as Training Management Officer of a USAR School.

Dr. Pierce's curriculum papers and articles have been published by the ERIC system of the US Department of Education and other professional journals in the social and library sciences.

Dr. Pierce has been a Fellow and curriculum writer for the Center for the History of the American Indian (Newberry Library, Chicago) and a participant in the Robert A. Taft Institute of Government, and Institutes and Seminars on Federalism and Appalachian Studies sponsored by the National Endowment for the Humanities. He was named a 1989 National Fellow for Independent Study in the Humanities by the Council for Basic Education and the National Endowment for the Humanities. He was selected for inclusion in the 1989-1990 and 1990-91 editions of Who's Who in American Education and Who's Who in the East.

- DISCLAIMER -

The opinions, findings and conclusions or recommendations expressed in this publicaton are those of the author [compiler] and do not necessarily reflect the views of the Commision on the Bicentennial of the United States Constitution, an agency of the federal government.

By the United States in Congreſs aſſembled,

SEPTEMBER 13, 1788.

WHEREAS the Convention aſſembled in Philadelphia, purſuant to the Reſolution of Congreſs of the 21ſt February, 1787, did, on the 17th of September in the ſame year, report to the United States in Congreſs aſſembled, a Conſtitution for the People of the United States; whereupon Congreſs, on the 28th of the ſame September, did reſolve unanimouſly, "That the ſaid report, with the Reſolutions and Letter accompanying the ſame, be tranſmitted to the ſeveral Legiſlatures, in order to be ſubmitted to a Convention of Delegates choſen in each State by the people thereof, in conformity to the Reſolves of the Convention made and provided in that caſe:" And whereas the Conſtitution ſo reported by the Convention, and by Congreſs tranſmitted to the ſeveral Legiſlatures, has been ratified in the manner therein declared to be ſufficient for the eſtabliſhment of the ſame, and ſuch Ratifications duly authenticated have been received by Congreſs, and are filed in the Office of the Secretary—therefore,

RESOLVED, That the firſt Wedneſday in January next, be the day for appointing Electors in the ſeveral States, which before the ſaid day ſhall have ratified the ſaid Conſtitution; that the firſt Wedneſday in February next, be the day for the Electors to aſſemble in their reſpective States, and vote for a Preſident; and that the firſt Wedneſday in March next, be the time, and the preſent Seat of Congreſs the place for commencing Proceedings under the ſaid Conſtitution.

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